

CLAIMS

1. Measurement device for detecting medical parameters in the human body, which can be accommodated in a body cavity (2), the device comprising at least one sensor (3) and a holder (4), the holder (4) has at least one first and one second magnetic element (5), of which at least one of the magnetic elements is a magnet and of which one of the magnetic elements is arranged inside of the body cavity and the other of the magnetic elements is arranged outside of the body cavity (2), and the measurement device (1) is adapted to be fixed by the holder (4) in the body cavity (2).
2. Measurement device according to claim 1, wherein one of the two magnetic elements (5) is a magnet and the other is a part made from a ferromagnetic material.
3. Measurement device according to claim 1, wherein both of the magnetic elements (5) comprise magnets.
4. Measurement device according to claim 1, wherein the at least one sensor (3) is connected rigidly to the magnetic element (5) arranged inside of the body cavity (2).
5. Measurement device according to claim 1, wherein the magnetic element (5) arranged outside of the body cavity (2) is the magnet.
6. Measurement device according to claim 1, wherein the measurement device is adapted to be moved within the body cavity (2) by rearranging or shifting the magnet.

7. Measurement device according to claim 1, wherein the at least one sensor comprises a plurality of sensors (3), which are provided with the magnetic elements (5) and which can be fixed in the body cavity (2) by at least one magnet.
8. Measurement device according to claim 1, wherein the measurement device is adapted to be inserted into the body cavity (2) via an implantation instrument or a catheter, or the like.
9. Measurement device according to claim 1, wherein the magnetic element (5) arranged outside of the body cavity (2) is adapted to be applied to a surface of the body or subcutaneously.
10. Measurement device according to claim 1, wherein the measurement device is at least partially sheathed or encased in a flexible, biocompatible material.
11. Measurement device according to claim 10, wherein the measurement device (1), and an electronic component arranged on the device, are provided with an additional coating.
12. Measurement device according to claim 1, wherein the measurement device is provided with a power supply, especially a battery or an accumulator.
13. Measurement device according to claim 1, further comprising an electronic memory unit (9) for temporary storage of data detected by the sensor in a region of the sensor (3) or one of the magnetic elements (5).
14. Measurement device according to claim 13, further comprising an evaluation unit for additional processing of the detected data is provided in a region of the sensor (3) or one of the magnetic elements (5).

15. Measurement device according to claim 1, wherein the at least one sensor comprising a plurality of sensors, the sensors (3) are provided for detecting values of pressure, blood-sugar level, hemoglobin count, oxygen and carbon dioxide partial pressures and content, and/or other selected values of the body cavity and/or a medium located therein.

16. Measurement device according to claim 1, wherein at least one storage device (8) is provided on the measurement device for housing a material to be introduced into the body cavity (2).

17. Measurement device according to claim 16, wherein a dosing element for controlled release of the material is provided on the storage device (8).

18. Measurement device according to claim 17, wherein the measurement device is part of a control loop and the dosing element releases the material as a reaction to a measurement value detected by the sensor.

19. Measurement device according to claim 1, wherein on the measurement device there is a transmission device (10), through which the measurement device (1) can be connected to a transmitter, receiver, and evaluation unit arranged outside of the body using a wireless and/or wired connection.

20. Measurement device according to claim 19, wherein the transmission device (10) has a radiation output for introducing electromagnetic radiation of different frequencies, especially visible light, into an interior of the body cavity (2).

21. Measurement device according to claim 19, wherein the measurement device is coupled to the transmitter, receiver, and evaluation unit via at least one optical fiber cable (11).

22. Measurement device according to claim 1, wherein the measurement device is provided with a thread holder (7).

23. Measurement device according to claim 1, further comprising a stent cage (12) connected to the measurement device.

24. Measurement device according to claim 23, wherein the measurement device is integrated at least partially into a lattice structure of the stent cage (12).

25. Measurement device according to claim 23, wherein the at least one sensor comprises a plurality of sensors, which are connected to the magnetic elements (5) and which are arranged in a plane of the stent cage (12) in a uniformly distributed arrangement.